

# FAQ - Troubleshooting

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## TROUBLESHOOTING THE BOOT PROCESS

**Q:** My Pentium PC can no longer start up from my hard disk. I cannot start up from the floppy drive either. I have replaced the floppy drive with a new one so know that it's not the drive which is at fault. Where do I go from here to get my PC hard drive working again?

**A:** Before we can address the problem with your hard drive, let's first take a look at booting from the floppy drive. First, test the boot disk that you are using in a different computer to confirm that it is working properly. If, the boot disk checks-out OK, and you still can't boot from your floppy drive, then double-check the data cable that goes between the floppy drive and the system board. Make sure that the cable is connected in the correct direction and that you have the floppy drive attached to the correct connector on the ribbon cable. A common mistake made when configuring floppy drives is to attach the floppy drive to the incorrect connector on the ribbon cable or to inadvertently reverse the connector connection. In either case, the floppy drive will appear to be malfunctioning; often the light on the floppy drive will stay a solid color rather than blinking during activity periods. Now for the hard drive. First, let's start by identifying where the connector is for the Primary IDE channel (Channel 0). It will probably be located on the system board. Look for some small writing on the actual system board that says something similar to "Primary IDE" or "IDE 0". After locating the correct connector on the system board, let's examine the IDE ribbon cable that you are going to use to connect the hard drive. Check the cable for a "notch" (hole) anywhere along the wiring of the cable. If the cable doesn't have any notches then it is most likely not a Cable Select cable and we will need to jumper the hard drive using a Master/Slave configuration rather than Cable Select. Since we have now examined each of the components, let's put it all together.

Attach the ribbon cable connector to the system board. If there are three connectors on your ribbon cable, attach the connector furthest from the other two connectors to the system board.

Jump your hard drive for either "MA" for Master or "CS" for Cable Select. This will depend on the type of IDE ribbon cable you have as I mentioned earlier. If the letters "MA" or "CS" don't appear on the hard drive check the hard drive manufacturer's web site for the correct jumper configuration for the Master or Cable Select setting.

Attach the hard drive to the IDE ribbon cable. Do not attach a Slave device; CD-ROM or other hard drive at this time. If you are using Cable Select it is important that you attach the hard drive to the correct ribbon cable connector otherwise the computer will not "see" the hard drive. If the Master position isn't written on the Cable Select cable, then you may need to check the manufacturer's documentation or web site for the correct position of the Master hard drive. Failing that, you could try both positions. But, if you choose to try both positions, you must repeat steps 4 and 5 for each position you attempt.

Attach the power connector to the hard drive and plug the computer into the wall. Then power on the computer.

Enter the correct key sequence to access the CMOS Setup program. Once in the CMOS Setup program, you will need to locate the hard drive configuration area. Most Setup programs have the navigation keys described at the bottom of the screen and some also have

help menus. Once in the hard drive configuration area, attempt to detect the attached hard drive. When properly detected, it will appear with some configuration information such as heads, cylinders and so forth. You must attempt to re-detect the hard drive even if some configuration information already appears. Be sure that you are attempting to detect the correct hard drive, which should be the Primary hard on the Primary IDE channel. In some Setup programs this is identified as “Primary/Master” or sometimes “Primary/Primary”. Once you have successfully detected the hard drive save the changes that you have made and exit the Setup program. Some Setup programs use the words “Exit Saving Changes” this is the option that you would choose.

Insert the boot floppy disk into the A drive and reboot the computer. When you get to the A prompt type “C:” and press Enter. If your hard is formatted, you should now have a C prompt on the screen. If the hard drive isn’t formatted then you will have to use FDISK and format to configure the hard drive.  
I hope this helps!

**Q: I am running Windows 95 on my PC and when I boot-up, it displays a black screen and the following message:**

**“A device file that is specified in the system.ini file is damaged. It may be needed to run Windows. You may need to run the Windows Setup program again. If the file was included on another software package, you may need to reinstall the software that uses the file c:\windows\system\VMM32\NTKERN.vxd.”**

**What should I do to eliminate this? If a hit “enter” twice, Windows boots up without a problem.**

**A:** Thanks for the question. If your PC seems to work without any problems after booting, this problem may simply be “cosmetic” in nature. You may sometimes end up with references to unneeded drivers in the Windows boot files such as “system.ini”. This is usually due to improperly or incompletely uninstalled programs or other such events. If the missing file isn’t causing any problems when using Windows, the simple answer is to get rid of the message.

To prevent the messages from appearing on boot-up, you should “comment” out the offending lines in the system.ini file. This is accomplished by placing a semicolon at the beginning of the line referencing the driver and causes the line to be ignored by Windows. The lines are commented instead of deleted so that the process can be easily reversed later if undiscovered problems arise.

Use the System Editor to open and edit the System.ini file. To launch the editor, click Start, click Run to open the Run dialog box. Enter sysedit and click OK. Click on the window showing the System.ini file and use the search feature to look for the line containing c:\windows\system\VMM32\NTKERN.vxd. Place a semicolon (;) in front of each line that contains a reference to the driver.

Save your changes and reboot your PC. The message should no longer appear.

**Q: I have an old “original Pentium” motherboard with a 166 MMX chip (Intel). For some or other reason, the keyboard locks itself at boot-up. I have checked the motherboard connector for the keyboard jumper - nothing connected. I have tried various keyboards but to no avail. I can get into the CMOS, but then the keyboard locks up and stops functioning completely. PLEASE HELP!!**

**A:** Thanks for the question. It is possible that you have an IRQ conflict caused by an improperly addressed legacy card (very unlikely since keyboard is ALWAYS IRQ1) or a malfunctioning legacy or PnP card. Also, it's possible there is a conflict caused by your BIOS setup. Since you can't get in to change the settings, you might start by setting BIOS to defaults by adjusting jumpers (see your system board documentation to find out how to do this), or, as a last result, removing the CMOS battery. If the problem persists after that, try removing all cards except for the video card and rebooting. If the problem still remains, you probably have a bad keyboard controller and will need to replace the system board.

**Q: Win 98 and Win 2000 can be run in a dual boot configuration if they are both set for FAT 32. Why does the answer in the OS test bank say they can be partitioned as FAT or FAT 32? I didn't think 98 could run under FAT 16. Can you explain?**  
**TFIEGENB@SCCD.CTC.EDU**

**A:** Hi! Thanks for the question. You're bringing up several important things to consider when planning a dual boot. All of these issues are covered on the A+ OS exam, so it's important to thoroughly understand them. First thing to know is Windows 2000 does not support a dual boot unless the second operating system is on a different partition, so you must use at least two partitions on your hard drive.

So now you've got Windows 2000 on one partition and Windows 98 on the other. If you never intend for either operating system to see the files on the other partition, you can use any file system on the Windows 2000 partition that Windows 2000 supports and any file system on the Windows 98 partition that Windows 98 supports. Windows 2000 supports FAT16, FAT32, and NTFS. Windows 98 supports FAT16 and FAT32.

If you used either FAT16 or FAT32 on the Windows 98 partition, Windows 2000 can access files on that partition since Windows 2000 can understand both file systems. However, if you want Windows 98 to be able to access files on the Windows 2000 partition, don't choose NTFS for the Windows 2000 partition, since Windows 98 does not understand NTFS.

So, what to do? In order for both OSs to read both file systems, use either FAT16 or FAT32. Which to use? The best choice is FAT32 because FAT32 makes the best use of hard drive space and can be used on larger drives. (Actually, you could use FAT16 on one partition and FAT32 on the other, but it's best to just use FAT32 on both.)

Hopes this helps to clear thing up!

**Q: I have a five year old Desk Top, Aptiva 2162 Pentium 233 with a Quantum BF 6.4G HD and WIN 95. The problem I'm having is that on boot, all I get is an**

**error message stating that I have a non system disk, to remove it, and hit any key. I checked and I don't have any disk inserted anywhere. I also have gone into the BIOS to force the system to boot straight off of the HD, but it still gives me the same error message.**

**I then installed a startup disk and tried it again. I was able to get to the hard drive and view/modify the file structure. Now after all this testing, I think I've come to the conclusion that the system lost its instruction cache. I'm not sure where this is located or how to fix this problem. I've been doing a lot of research over the past few days and it seems that it could be in or near the CPU. If it is in the CPU, I could just replace it. What should I do?**

**A:** Thanks for the question. Your problem probably lies with the files on the hard drive. The boot sector has been damaged or the files that are necessary to boot the system have been damaged or removed. Boot with the startup disk and use the SYS C: command to try and restore the files. If this does not work try using FDISK /MBR to rewrite the master boot program on the hard drive. If none of this works, your next option would be to use the startup disk to boot, copy any important files you have to floppy, and then reinstall Windows.

**Q:** When I start my computer, the Win98(SE) logo appears, but then it goes to a screen that says that I'm missing vsdata95.vxd, in the sys.ini. How can I fix this?

**A:** Vsdata95.vxd is a file used by Zone Alarm. If you have deleted this file and not uninstalled ZoneAlarm then you can try replacing it in the C:\windows\system directory. If you have uninstalled Zone Alarm and the system.ini file was not modified by the process, select Run from the Start menu and type sysedit to display the configuration files. Search the C:\windows\system.ini file for the reference to the file and erase it and save the change. If the uninstall process did not remove references to other files, a list of what should have been removed is located at [www.zonelabs.com/services/support\\_install\\_98.htm](http://www.zonelabs.com/services/support_install_98.htm).

**Q:** I've got two hard drives. Sometimes at boot up, both drives are detected perfectly. Other times, my master drive goes undetected while my slave is detected. Subsequently the system asks me to press a key to reboot. Initially, I thought it was a data cable problem, but now I doubt it. I isolated the problem by unplugging my slave and swapping the connector to my master. The master still went undetected. Each time it goes undetected, I have to re-plug the data cable and power cable to my master and reboot many times before it works.

**Can you tell me what's wrong?**

**A:** Sounds like you've already made some progress in isolating the problem. You are on the right track by checking cables. I suspect that the power cable has a problem or the master drive is going bad. Try switching the power cables to eliminate that cable as the source of the problem. Then, if you have one, try another data cable that you know is good. If that does not solve the problem, try a different jumper cap on the master and make sure the cap on the

master is good and tight.

If none of these things solve your problem, you can assume the hard drive is on its way out or your IDE controller on your motherboard is flaky.

**Q: I just got an older Dell 466dv computer. It runs Windows 3.1 workgroups. When I turn it on, it goes straight to Windows 3.1, then to Program Manager, then the hour glass comes up and it freezes. It won't unfreeze. What can I do? Please help.**

**A:** Well, it's been a while since I've worked with Windows 3x, but the question is what is Windows looking for? Possibly an application it can't find. Look in the Win.ini file for command lines that begin with Load= or Run= and delete any programs referenced here. Also check Autoexec.bat and Config.sys for entries that refer to unwanted programs or applications. It's also possible that Windows is set to be a DHCP client and is waiting for an IP address.

**Q: Please help. I lost my disks to my computer that allow me to make a boot disk for my Windows 95 Dell PC. I have 3 more computers with Windows XP and Me. Can I make a boot disk for my 95 from one of these?**

**A:** Yes, you can make a new boot disk from either the Windows 95, Me or XP computers that will work on your Windows 95 PC. One way to create the startup disk using Windows 95, 98 or Me is to use the Add/Remove Programs applet in the Control Panel. For Windows XP, using Windows Explorer, right click on drive A and select Format from the shortcut menu. Then on the format window, check Create an MS-DOS startup disk.

I suggest that you make a startup disk for the Windows 95 computer using that computer rather than the Me or XP computer. An MS-DOS startup disk made on any of these computers will work on any of them, but it's always the best practice to create the startup disk on the computer that will be using it.

**Q: My computer takes a long time to boot up. I wanted to know how to reduce the loading time because I know my hard drive is completely dismantled. Can you help me?**

**A:** I believe what you mean when you say the drive is dismantled is that your drive is fragmented, or possibly full. If this is the case, then indeed it can cause a slow boot and also slow data/read performance that will affect overall performance. If you are using Windows, try using the Defrag utility to defragment the drive. You can also remove any unnecessary programs from the Startup folder. If you are very committed you may want to search the registry and remove any instances of unnecessary programs that launch during boot.



If the drive is full, look for applications you can uninstall or data such as photographs that you can delete. Be sure to empty the Recycle Bin when you're done. After you've deleted everything, then run Defrag again.

**Q: I have received this error message: Error Message Rundle32**

**Microsoft tells me to go into the System.ini file and use a text editor like notepad to add another line to the boot record. My question is: how do I get into the System.ini file?**

**A:** System.ini is in the C:\Windows folder. Open the folder and find the file. Right click on it and select Open with from the shortcut menu. You should be able to edit the file with no problems.

By the way, if anyone is trying to find out what this error message means, you can search on Rundll32 at the Microsoft support site ([support.microsoft.com](http://support.microsoft.com)).

## **TROUBLESHOOTING THE ELECTRICAL SYSTEM**

**Q: I have a Pentium I 166 MHz. When I turn on the computer, after a few second of boot up, I get a message "CPU fan malfunction, press any key to continue." In the meantime I hear a continuous buzz. I checked and the CPU fan is working. The same thing happened one year ago. I took to the store where I bought the computer, and they fixed it. Now one year later the same thing happens. What do you think is the problem? Thanks, ali\_moghadam@yahoo.com**

**A:** Thanks for the question. The problem is probably caused by cables (most likely drive power cables) that are touching the CPU fan, which is causing the buzzing sound. The BIOS in your system board has a function that monitors CPU fan RPM. When the cables are touching the fan, they slow the fan and this causes BIOS to send the alert. Besides interfering with the CPU fan, sometimes cables can rest on the system board, which can cause even more serious problems. The reason you were able to verify the fan was working when you opened the case was probably because the cables were moved when you removed the case cover, causing the fan to work properly. Try using "zip-ties" or even rubber bands to remove the slack in your cabling and your problem will probably disappear.

**Q: Isn't it a bad idea to "shut down" your computer multiple times per day?**

**A:** Yes, I think it is hard on your PC to do that. It's less stressful to the hardware to keep the power on because the sudden application of power to the circuitry can be stressful to electrical components. You can, however, turn your PC off at the end of the day to conserve electricity. Some companies have the policy to always leave the computers turned on and others have the policy to power down at the end of the day. For home use, I'd try to limit

power on to no more than once a day.

To save on power, be sure to enable any power saving features your PC might offer such as sleep mode.

## **TROUBLESHOOTING THE MOTHERBOARD AND CPU**

**Q:** I have a problem with my computer. Ever so often, I receive a blue screen with a VXD error message. The “experts” have been telling me everything from video drivers to memory problem. The error message occurs anytime, but more so when I’m running the TV or several applications at the same time. The system has 64MB of RAM and runs Windows98.

**A:** Thanks for the question. I have a couple of ideas, but just like the “experts,” no one answer that I’d bet the farm on. If you’ve noticed the error occurs when you’re using a lot of system resources such as when several applications are open, it’s likely that you are running short on memory. You might verify that you’ve got virtual memory set so that Windows 98 is managing it automatically and no manual settings are interfering. To do that, from Control Panel, select the System icon and then the Performance tab. Click the Virtual Memory button and make the selection to Let Windows manage my virtual memory settings. Then make sure the hard drive holding the swap file for the virtual memory has plenty of free space. The bare minimum is 100 MB.

Another option is to add more RAM. For a Windows 98 system, upgrading to 128 MB can sometimes improve performance and reduce errors. Before you spend money on upgrading memory, you might want to first reload Windows to make sure a corrupted Windows installation is not the source of the problem. By reinstalling Windows, you’re also forced to reinstall the video drivers which will also eliminate them as the source of the problem.

**Q:** In the windows 98 memory map, at which ring do the virtual device drivers function?

**A:** Thanks for an interesting question! The first thing to know is that rings have to do with the degree of access a program has to hardware rather than how memory is mapped. The Windows 98 kernel runs at ring 0, which is the highest priority and has the most access to hardware. Virtual device drivers also run at ring 0. Rings 1 and 2 are not used by Windows 98. Ring 3 is the lowest priority and has the least access to hardware. Applications run at ring 3. Any program running at ring 3 does not have direct access to hardware and must go through the kernel to use the hardware.

**Q:** Jean, I installed another 64 mgs of memory and my system is not recognizing the extra memory. How can I verify this? obolt1@aol.com

**A:** There could be any number of things causing the problem. Here are some things you



can do and try....

System boards are particular about what slots can contain memory. For instance, your system board might be built to recognize a single 128Mb DIMM in slot 1 or two 64 Mb DIMMs in slots 1 and 3 but not one and two. Check your documentation to verify that that is not the case. Also, for the most part you cannot mix and match memory types and speeds. Do not use both PC100 and PC133 sticks in the same machine. Another possibility is the memory slot is bad. For DIMMs you can move the stick from one slot to another with no problem. Try a different slot.

It is also possible that the memory is bad. Some BIOS does not do a good job of detecting bad memory. A free memory checking utility is available from [www.memtest86.com](http://www.memtest86.com) for Linux and Windows with a processor in the X86 family.

**Q: My old computer has a Fugutech motherboard (i430VX chip set); CPU 200MHz Pentium2 (p4). It is running Windows 95 with 80MB of Fast Page RAM (2x32M + 2x8M) SIMMs. The BIOS is AWARD and my HD is 10G.**

**In an attempt to upgrade the computer to support a newer Windows OS, I bought 2x32M Fast Page SIMMs to replace the existing 2x8M SIMMs. Unfortunately, the computer only notices half the bytes of the new 2x32M SIMMs.**

**My motherboard has two banks (2 SIMMs per bank). The motherboard manual lists EDO or Fast Page as acceptable, though it doesn't specify if one bank can be Fast Page and the other EDO.**

**Why didn't the new 2x32M SIMMs work for me? Do you think EDO is likely to work better? Will a BIOS upgrade be required? Is upgrading the BIOS reliable?**

**A:** First, let me say thank you for giving me such detailed info about your system. This is exactly the type of information that should be passed along to help someone assess the situation. As to what to do to solve the problem, there are two possibilities that are likely to be the source. First, the problem might be with the new SIMMs. If your board allows empty slots, try removing first one and then the other to verify that both SIMM's and both slots are recognized. You might also try removing the original SIMMs and using only the new SIMMs in the first two slots to verify that the new SIMMs can work independent of the old SIMMs.

Unfortunately, it is possible that you have a mislabeled SIMM. One of the SIMMs might really be a 16MB SIMM that has been relabeled. This practice is not uncommon and may be even more common with harder to come by memory.

Another possibility is that the BIOS supports only 96MB. You have a great idea in upgrading BIOS. The process is usually quite reliable and may allow you to upgrade the amount of RAM your system will support. When upgrading, follow the directions explicitly and if given the opportunity always back-up your original BIOS.

**Q: How can I get around the award bios password?**

**A:** Thanks for the question. I'm assuming you want to get around the password because you've forgotten it, not because you're hacking! Right?

Most likely, the only way to get around this is to remove the CMOS reset jumper on your system board. If you are not sure which jumper this is, check your system board documentation. Also, you can remove the CMOS battery. Both of these options will remove power to the CMOS chip clearing all settings including password. Be sure to do this with power off and using an anti-static strap. Leave the jumper or battery disconnected for 30 seconds just to be sure the voltage fully dissipates, and then put the jumper or battery back.

Now you will have to go back and set up the BIOS. At a minimum, you need to detect the hard drive and set the date and time. If you can remember any other settings, make these changes as well. Then save the settings and reboot. Booting with default settings will usually work with most systems. If your BIOS was set up with other settings than defaults, some things such as power management might not work correctly.

This is dangerous information to know, so don't use this method unless it's your only way to access the system. You might spend some time getting the BIOS settings back to just what they should be to make the system work properly.

**Q: How do you fix a bad CMOS upgrade after flashing it with the wrong upgrade data?**

**A:** Well, the first thing to ask is did you create a backup of your BIOS before you flashed it? I'm thinking that if you had done that, you probably wouldn't be asking this question, so I'm assuming you don't have a backup. Therefore, the first thing to do is to go to the web site of the BIOS manufacturer and look for some help there. There might be an undo utility you could use. You might be able to download a backup of the BIOS from the web site and also download the undo utility to revert back to the original BIOS.

If the web site doesn't give you the help you need, you can call technical support for the BIOS manufacturer. Before you call, open the case and copy down everything printed on top of the BIOS chip. Technical support can use that information to identify your BIOS and tell you what to do. Worse case is that you will have to replace the BIOS chip. Be sure you get one exactly like the old one. BIOS technical support can help you there, too.

I know this is a frustrating problem to have. Hope you get the help you need.

**Q: I have formatted my hard drive and made it bootable, but when I try to install Windows 95, the system hangs. What could be the problem?**

**A:** I'm having some trouble diagnosing your particular problem because I don't have enough information. I need to know at which point during the installation the system hangs.

However, some things that might cause this problem at different stages are:

- Faulty RAM
- Bad sectors on the hard drive
- CMOS settings that conflict with the way Windows 95 interacts with devices during setup
- Devices that confuse the Windows 95 setup routine

My best advice is to remove all devices besides the drives and the display adapter, set the CMOS to the “fail-safe” option and try to install again. That will minimize the chance of confusion from settings or devices. If that does not work you may wish to remove the existing RAM and try swapping in some that you believe is OK. You may not have this luxury, but if you have more than one stick of RAM, you can try one at a time as long as they are both more than the 4MB that Windows 95 requires. I would recommend that you have at least 32MB of RAM to run Windows 95 so you might not mind purchasing at least that much to test with and use afterwards. You will be glad that you did!

**Q: A program I am running takes a long time to process the data and complete a task. What could cause this?**

**A:** Thanks for the question. It could be any number of things causing the slow performance. The very same system can perform differently depending on what you are asking it to do. For instance, it might run with no noticeable problem when doing one thing, but when you start another application it slows way down. If your system is humming right along when you use a word processing application, but bogs down and you can hear the hard drive “thrashing” when you try to open another document, it would suggest a memory problem. It might be reaching the point of using almost all of its physical memory (RAM) and is moving data that is “out of view” to the page file and back.

Or perhaps the system runs fine when browsing the Internet but bogs down when playing a video game. This would suggest that the video card or the processor lacks the power to keep up with the demands of the software. Some of the more common causes of slow performance are disk fragmentation (symptoms are applications are slow to start and there is a disk noise), failing to exceed minimum system requirements (minimum requirements = minimum performance), and large browser caches (a browser is slow to load pages).

If your system performs well except for this one application, I might start there. Try uninstalling and then installing the application again. It might just be a corrupted application or some application settings went hay wire.

**Q: My son's CMOS is password protected. We do not know the password as it was purchased from a friend. How can we bypass it? Also, we are trying to get the CD-ROM to work in DOS by copying the file A:\oakcdrom.sys C: and then adding it to Config.sys and Autoexec.bat. What is the line to add and what is the placement?**

**A:** We'll start with the password protection. There is usually a jumper setting on the motherboard that will clear the CMOS settings. Often you must remove the jumper for a few seconds before replacing it in order to clear the settings. Other motherboards may require the opposite of that procedure. Check the motherboard documentation to find out how to use the jumpers. Once CMOS setup is cleared, the settings will return back to factory default settings, so you'll need the documentation to adjust these settings if necessary. If you don't have the documentation, look at the motherboard manufacturer and model number, which should be stamped somewhere on the board. You should be able to find the documentation on the Internet.

If you can't find the documentation or figure out how to use the jumpers to clear CMOS, as a last resort, you can remove the CMOS battery to clear the settings.

As for the DOS configuration files, try these edits to the particular files:

In Autoexec.bat, add the line:

C:\DOS\MSCDEX.EXE /D:MSCD001

(assuming Mscdex.exe is stored in C:\DOS)

In config.sys, add the line:

DEVICE = C:\oakcdrom.sys /D:MSCD001

(assuming Oakcdrom.sys is stored in C:\)

This should make the CD-ROM drive accessible when you boot into DOS from drive C:.

## **Q: My computer always freezes (stops). What could the problem be?**

**A:** There could be any number of things that could cause your computer to freeze at several different stages of computer operation. The possibilities are so numerous that without further information to guide me, it would be impossible for me to say what the cause of your problem is. I can, however, offer a few simple guidelines about how to find and hopefully fix the trouble.

The process of troubleshooting a problem with a PC (and lots of other things too) can be summed up as Duplication and Isolation. To start with, you want to establish what state the system is in when the problem occurs by verifying and repeating the problem. This is the "duplication" part. Be very observant of what applications are running and of what specifically the system is doing when the problem occurs. Take notes and gather as much information as you can. The state of the system (what was going on when the problem occurs) and the symptoms of the problem usually point to a place to start. Knowing where to start looking and what to look for involves a basic understanding of computers. For example, if you're having a problem accessing the Internet, you know to check if your phone line is plugged in, rather than checking if your monitor is turned on! Even then, it's not always obvious what is causing trouble, but knowing what component to suspect grows easier with experience.

Once you have a good idea what to look for, you should try and think of all the things that might be causing the condition. For instance, suppose you have a problem with no picture on

the monitor. It might be switched off, not plugged into power, not plugged into the display adapter, the picture tube might be burned out, and so forth.

Once you have your list of possibilities, organize the list with the easiest to check and/or most probable cause at the top and try that first. Then go through and test each possibility and eliminate them one by one. If you were thorough and made logical conclusions, you should be left with one item that you can't eliminate. You now have your problem "isolated." Now you can begin to decide what you need to do to fix the problem.

One big thing to look at when a computer freezes is whether or not it freezes during or after the boot. Pay attention to error messages on your screen and also to what you are doing exactly when the freezing occurs.

Best to you on a good research project!

## **TROUBLESHOOTING THE VIDEO SYSTEM**

**Q: I have a Compaq us5000. My machine turns on but it won't power the monitor. The monitor works on another machine, as does the monitor cord and the video card. Every once in maybe 20 or 30 on/off's it will work. Then it will not power up the monitor again the next time I turn the power on. Any suggestions?**

**A:** The fact that the monitor works on another PC indicates that the fault is likely with the power connector coming from the case. The problem could possibly be with the switch/relay or loose wiring within the power supply. Can you try switching the power supplies? Unless you are thoroughly familiar with electrical component repairs, do not attempt to repair a power supply. Best practice is to install a new one.

Of course, an easier solution that simply avoids the problem with the case providing power to the monitor is to use a separate power outlet for the monitor.

**Q: After loading Windows 98, my office computer displays only 16 colors. I tried to change the color settings but it did not help. I cannot load some software programs because the error messages say 256 colors are needed. Please help.**

**A:** Sounds to me like you either didn't get a good Windows load or the video driver is giving trouble. First try reloading your video card drivers. If that doesn't help, the next step would be to reload Windows 98 (Ugh!).

## TROUBLESHOOTING THE KEYBOARD

**Q:** I have an IBM Aptiva computer. I installed the software for the media access pro keyboard. When I re-boot I get a 301 keyboard error. What should I do?

**A:** The most likely cause of this error is the keyboard is unplugged. However, a stuck key, a bent pin on the keyboard connector, or some other physical defect on the keyboard can cause the error. The software you loaded should not have any affect on the boot process at this point in the process. Examine the connectors for any problems and if you don't find any, try the old keyboard. If the old keyboard works, then it is safe to say the new keyboard is defective.

## TROUBLESHOOTING THE MOUSE

**Q:** I have a Pentium 2, 350 Mhz CPU & am running Windows 98. Recently I have been having a number of problems. The clock is losing time (I have replaced the CMOS battery). Also the computer is running "haltingly." When typing, it will take a second for the print to appear on the screen. Also, when moving the mouse the cursor will freeze & then jump to a new location. Any ideas?

**A:** I have an old Celeron PC that is doing just about the same thing except I don't have the problem with the clock losing time. It's possible the clock problem is not associated with the "haltingly" problem. Since you've already replaced the CMOS battery (by the way, that was a good move), I would tackle the haltingly problem next. Here's what I intend to do with my old PC, but just haven't gotten around to it yet:

- Scan for viruses
- Verify the hard drive has enough free space and run ScanDisk and Defrag
- Look for too many applets running in the System Tray, which takes up processing power

If none of that works, then I plan to start over. The PC has been used for all kinds of things for several years without any real maintenance, so it's ready for an overhaul. I'll erase everything on the hard drive, and then run ScanDisk again using the Thorough option. Next, I'll reinstall Windows and the applications.

The problem is probably caused by some Windows corruption caused by installing and uninstalling too many applications. However, if this overhaul doesn't solve the problem, I'll then suspect a hardware problem. It could be a failing memory module or it might be a faulty hard drive or controller. I'll first run a memory tester program or simply try some new memory. If new memory doesn't solve the problem, I'll next try a new hard drive.

As to the problem with losing time, there might be a problem with the battery connecting to the motherboard. Does the PC lose time if it's left powered up? If it does, then you might have a problem with the BIOS. Try flashing it.

There are lots of things to do and try, so it should be a fun weekend project.



## TROUBLESHOOTING WINDOWS OPERATING SYSTEMS

**Q:** Whenever I try to shut down and my screen says windows is now shutting down, it stays on that screen forever and will not change to the shutdown screen. I have to either reset or turn off the machine and then when I log on again there is this message which says windows was not properly shut down and the discs have to be scanned, etc. How can I change this?

**A:** Thanks for the question. First thing that comes to mind is that Windows 98SE has a known problem that causes Windows to sometimes hang while shutting down if there has been a drive mapped. There is a patch for this available using Windows Update. You might also try updating all your drivers, especially video drivers.

**Q:** During a recent thunderstorm the screen on my Pentium III flickered and my internet connection failed. When it was used later that evening (after the storm!) It was necessary to reboot the cable modem in order to obtain a new IP address. My system dual boots to Win98 and Win2000. The Win98 partition began to lock up at random but frequent intervals. I realize that damage probably occurred as a result of the lightening...But I am undecided whether to re-install the OS (Win98) or try just re-installing the drivers to see if that will help. The damage could be either software or hardware related. Is there a test we can run to rule out one or the other?? Any advice would be great.

**A:** If Windows 2000 is working fine, it is very unlikely there is a hardware problem. The possible exception is that there was a head crash on the hard drive where system files or drivers for Windows 98 were stored. Run scandisk with a surface scan to detect any physical problem.

If there are major problems detected (many bad sectors), I would replace the hard drive. To do that, first install a new hard drive and reload the operating systems. Then copy data files from your old drive to the new drive before removing the old drive.

For minor problems or no problems at all from scandisk, I would just back up data files to the Windows 2000 partition, format the Windows 98 partition, and reload Windows 98. You should be OK.

**Q:** I have a problem on a Win98 PC. When I try to run ScanDisk, it won't run because it says that something was writing to my hard drive. Could you give some help with this?

**A:** It sounds to me like you are getting the message, "ScanDisk has restarted 10 times because Windows or another program has been writing to this drive". While ScanDisk is in the process of checking a drive, it will restart if it detects another program accessing the drive. If this keeps happening, you eventually get the above message.

The culprit could be a screen saver, the auto-save function of a word processor, a weather-checking application running in the system tray, or just about any other program that is also running.

Microsoft has a nice tech tip that will step you through getting around this problem at this link: <http://support.microsoft.com/default.aspx?scid=kb;en-us;Q222469>

However you shouldn't consider this issue a problem because, as they say at the bottom of the tech tip, "this behavior is by design".

**Q: I'm attempting to reinstall Windows ME, but a suwin error kills the install! Can you help?**

**A:** What to do about this really depends on the exact error message. The problem might be due to any number of things ranging from faulty memory (cache or RAM), to improper BIOS settings (mostly involving memory timing), to problems with Internet Explorer, Windows Media Player or even SQL Server. I recommend that you search the Microsoft Knowledge Base at [support.microsoft.com](http://support.microsoft.com) for more information. When you encounter the error, write it down. Then search the knowledge base using "suwin error" and the particular error message or component that the error identifies as causing the fault.

**Q: Can you tell me why Windows XP will not allow me to format or run 3.5" floppy disks?**

**A:** It could be any number of things. Windows XP should be able to format a 3.5" floppy disk with no problem. There are several things you can check or try. Have you checked the write-protect notch on the disk to see if its write protected? Have you tried a different disk? Have you tried formatting the disk on another Windows XP machine? Are you sure the floppy disk drive works? (Try reading a disk you know is already formatted.) Do you see the light on the drive when you're trying to read/write to a floppy? It might be a hardware problem.

**Q: I have a problem. I'm running Window 95. My computer asks me to insert a startup disk, but I have no startup disk. What should I do?**

**A:** You can make a startup disk on any Windows 95 computer – it doesn't have to be the broken one. Go to another computer and insert a blank floppy disk in the drive. Then go to the Windows Control Panel, Add/Remove Programs applet. From there you can create the disk. Take it to your broken PC and boot.

## TROUBLESHOOTING DOS

**Q:** How do you copy the msd.exe file from the bootable disk onto the hard drive?

**A:** One of the most basic functions of an operating system such as DOS is the ability to move or copy files from one location to another. DOS has an internal command built into the command interpreter that performs this function.

The COPY command can be used to copy a given file or multiple files. When using this command, the source drive, directory path, and file is specified in addition to the destination drive, directory path, and file name. It is not a bad idea to use the full path information to make sure the correct file is copied to the correct location. As you get proficient with the command there are some shortcuts, but it is better to be safe than sorry. By providing the full path, the command should work from any prompt location.

As long as you know the source and destination information, the syntax of the command is fairly simple. To copy the msd.exe file from the root of the floppy disk in drive A to the root of the hard drive C, type the following:

```
COPY A:\MSD.EXE C:\
```

Notice that the first parameter (A:\MSD.EXE) specifies the location of the source file and its name. The second parameter (C:\) specifies the destination where the file should be copied.

If MSD.EXE is located in the TOOLS directory on the floppy and needs to be copied to the UTILS directory on the hard drive, then type:

```
COPY A:\TOOLS\MSD.EXE C:\UTILS
```

Notice the MSD.EXE name was not specified in the second parameter. This will keep the file named the same. You could change the file's name during the copy process by providing an alternate name at the end of the second parameter such as:

```
COPY A:\MSD.EXE C:\NEWNAME.EXE
```

Remember DOS only allows up to eight characters in a file name.

**Q:** Could you please give me the commands to use to FORMAT Drive C: in DOS? I want to format my drive C: but whenever I try the process, the message that appears says that "some other processor is using the drive." Currently, the drive is infected with a virus and I cannot afford the right anti-virus so I want to format the C: and reinstall Windows Millennium Me.

**A:** In order to repartition and reformat the drive, you'll need a Windows 9x Emergency Repair Disk created using the Add/Remove Programs icon in Control Panel. You could have someone that you trust who has a clean version of Windows 9x create the disk for you on

their PC and then use the disk on your PC. The Emergency Repair Disk has all you should need to remedy your situation on the cheap. Make sure that you do not pass along the virus by giving them a floppy that has been infected on your system. At the very least the disk must be scanned by an anti-virus utility with the latest definitions, but preferably you should use a brand-new floppy. After the Emergency Repair Disk has been created, be sure to write protect it by sliding the locking tab toward the closest edge. This should prevent it from being infected by your system.

Boot with the ERD to begin repairing your system. Many viruses reside in the master boot record area of the hard drive. You should be able to use `fdisk /mbr` to rewrite your master boot record, unless you have an exotic partitioning setup. This should clean up that area.

If you want to repartition the drive, do that now. Then reboot, selecting CD-ROM support so you can access the CD drive to install Windows.

Next use `format c: /u /s` (the `/u` specifies an unconditional format) to format drive C:. Then format any other logical drives using `format x: /u`.

At this point you should be able to safely reinstall Windows.

## TROUBLESHOOTING FLOPPY DRIVES

**Q:** I obtained a brand new copy of WinZip, yet when I tried to unzip a program off of my floppy, it said it couldn't read the first file. Do you think it is a bad WinZip program, or maybe a bad floppy?

**A:** I can think of three possible causes of the problem. It could be a bad floppy disk and/or drive. It might be a bad file, or perhaps it's a bad installation of WinZip. The key to solving this type of problem is finding out what does work. To test the floppy and WinZip, try to unzip another file on the floppy disk. If WinZip opens the file, then you know that WinZip and the floppy are functioning properly, and that would suggest that the first file is corrupted.

If you can't unzip any file on the disk, try reading and writing to other floppy disks to verify that the drive is functioning correctly. If both WinZip and the drive check out, then the error lies with the floppy disk.

If you still can't use WinZip, verify the WinZip installation. Try zipping and unzipping a file on your hard drive. If that works, then assume the problem is with your floppy disk drive.

**Q:** I just put some memory in my computer, 512 Mb of DRAM. Everything was working before I put it in, but when I put it back together my floppy drive doesn't always work. If I put anything in the drive, an error message comes up that says "A:\ is not accessible the system cannot read from the specific device." My "system properties" says the floppy is working fine. What can I do to fix this problem?

**A:** I know that this kind of problem can be frustrating. Who would think that installing RAM would cause the floppy drive to have problems? I have good news for you. There is virtually no chance that RAM could itself cause an isolated problem with the floppy drive. That being the case, this has all the earmarks of a simple cabling problem.

It is very possible that a connector is not seated firmly. If the drive LED never lights up it could be that the power cable is the culprit. However, the ribbon cable for floppy drive has a couple of peculiarities, in comparison to IDE or SCSI ribbon cables, that can make it confusing for many.

The floppy cable has a twist that reverses a number of the conductors between the middle and end connector. Also, the end connector with the "twist" must be connected to the single floppy drive. In the circumstance of a system with two floppy drives, the drive connected at the end will always be drive **A:**. Also note, the location of pin one on floppy drives is reversed in relation to IDE drives. Pin one is towards the edge nearest the power connector on IDE drives but is away from this edge on the floppy drive.

## **TROUBLESHOOTING THE HARD DRIVE**

**Q:** I have come across a new computer configured thus:  
**128 Ram, 20 GB HDD**

**Drive C - master**

**Drive D: Zip drive**

**Drive D: CD burner**

**Drive E: normal CD**

**Some programs wont run from the CD, the computer is slow to boot and freezes a lot during ordinary tasks - software is Office 2000, Windows 98.**

**All sorts of odd problems...**

**Is it likely to be that the arrangement of the drives has anything to do with it?**

**A:** Sounds like you might have a multitude of possible problems with the two drives assigned the same drive letter being only one of them. Since Office 2000 is the only application suite loaded, I think I would just get a fresh start and reload Windows 98 and Office 2000. (This would not be so easy if you had a lot of different applications loaded on an older, well-used system.) To make sure I got at the source of the problem, I'd back up the data and then repartition and reformat the hard drive. Load Windows 98 as a clean install and then Office 2000, and then restore the data. Sounds rather drastic, but it should solve your problems.

When you back up the data, don't forget to back up email, the email address book, and downloaded attached files.

**Q:** How do I know if my hard drive is reading or writing?

**A:** Usually an LED on the case will show you when the hard drive is active reading or writing. You can't be sure the drive is reading or writing if you hear it spinning; it may be spinning because it has just been actively reading or writing. If you can successfully boot, you can be pretty sure that the drive is reading and writing OK.

To know if the drive is reading or if the drive is writing requires more investigation. If you have Windows 2000/XP, you can use System Monitor to report the drive activity. From Control Panel, use the Administrative Tools applet, Performance tab. Select System Monitor. Right click on the monitor pane and select Add Counters. Add the Page Reads/sec counter and the Page Writes/sec counter. You can then watch the graph on the pane as it records all reads and writes. Position the monitor window on your screen so you can watch it while you work with your hard drive.

**Q: I run Windows 95. When I turn on my computer, it shows “starting Windows 95,” then it says “hhd failure,” then it says “c:” What can I do to fix this? I don’t know what command to type or use. It was working fine until I ran Norton virus. It showed a lot of repairs but no viruses. Then it froze up and went off. When it came back on, it showed the error, “hdd failure.”**

**A:** The first thing I thought of when I read this is, “I sure hope you back up your hard drive regularly!” It sounds like the problem occurred when you installed and ran Norton. The first thing I would do is, when you get to the C: prompt, type DIR and find out what’s still on your hard drive. If you get a directory listing, immediately copy any important files to floppy disk or another backup media. If the directory listing has trash in it, then you still might be able to use the COPY command to copy some files to floppy disk or you might have lost the entire contents of the hard drive.

Probably what happened is that when you were installing Norton, the “repair” process incorrectly rewrote some information at the beginning of your hard drive. You might be able to get some help from Norton tech support to repair the “repair.” It’s also possible by sheer coincidence the drive had a mechanical failure or the CMOS battery died at the exact time you were installing and using Norton. These are possibilities, but unlikely ones.

So, bottom line is here’s what I would do:

- Try to use the COPY command to save any important data files to floppy disk or other media.
- Call Norton tech support and ask for help.
- If that doesn’t work, then you’re most likely going to have to rebuild the entire hard drive. First, check CMOS and make sure BIOS recognizes the drive correctly.
- Use FDISK to repartition the drive and FORMAT C:/S to reformat it. Then reload Windows 95 and your software.
- Restore data files from backups.

You can look at it this way: If you’ve never rebuilt a hard drive, this is going to be a fantastic learning experience! On the other hand, if all this is pretty intimidating to you, you might want to ask an experienced technician for help.



## TROUBLESHOOTING CD-ROM DRIVES

**Q:** I am hoping that you can help me. I am having trouble with my CD-ROM drive. After I purchased and installed a CD-writer, I noticed that the CD-ROM icon disappeared from “My Computer.” Now I am not able to use the CD-ROM or the CD-writer. My PC is an HP with Windows ME and the CD burner is a NERO. Can you tell me what should I do?

**A:** You didn’t say if you removed the CD-ROM drive when you installed the CD-writer. I’m guessing you probably did. So the first thing I would do is look in Device Manager to see if the system recognizes the CD-writer. If you see the CD-writer listed, does Device Manager report any errors with the device? Also, does Device Manager see the CD-ROM drive, and does it report problems with the drive? Look at any errors you find and see if there are clues that can help you identify the problem. If you still can’t get the writer to work, the next thing I would do is to use Device Manager to delete or uninstall both drives. After both drives are uninstalled, reboot the system. The Found New Hardware wizard should launch and step you through the process of installing the drivers for the CD-writer, which probably came with the writer stored on floppy disk. Also, if the CD-writer is an IDE device, verify you have the jumpers on the drive set correctly for the IDE connection and setup you are using.

If you are trying to get both the CD-ROM drive and the CD-writer working in the same system, are they both IDE devices? Are they attached to the same IDE cable? If that’s the situation, perhaps you have the jumpers set wrong on one or both drives. If they’re using the same cable, make one drive the IDE master and the other drive the IDE slave. After setting the jumpers correctly, reboot and the system should recognize the new drive and launch the Found New Hardware wizard so you can install the drivers for the drive.

**Q:** I need some help. I deleted CD-ROM and my CD player is not working. The CD-ROM drive is missing from device manager too. Can you help?

**A:** The solution is to reinstall the CD-ROM drive. You did not say which operating system you are using, but if you are using Windows 9x, Windows 2000 or Windows XP, when you reboot your computer, the Found New Hardware wizard should launch and step you through the process of reinstalling the drive. If this does not happen, then try these things:

- ☐ Check Device Manager and look for the CD-ROM drive. If you find it, check its Properties window for errors. If you find errors, you can select it and uninstall it. Then when you reboot, the Found New Hardware wizard should launch.
- ☐ If the wizard does not launch, there is a possibility the drive itself has a problem. Open the case and verify the data cable is attached at both ends and the power cord is attached to the drive. When the PC is running, if you press the eject button and the tray comes out, you can assume the drive has power.
- ☐ If the Found New Hardware wizard still does not launch when you reboot, try installing the drive manually. In Control Panel, double click the Add/Remove Hardware icon and follow

the Add/Remove Hardware wizard to install the drive.

☐ If all these things don't work, then I would treat the problem as a hardware problem. Maybe the drive is not working. Can you substitute a known-good drive?

Once you find the drive in Device Manager, look at its Properties window and check for errors. If you find no errors, then try a CD.

## TROUBLESHOOTING PRINTERS

**Q:** My computer has no sound and I'm afraid I may have deleted a driver. What should I do? My computer uses Window 98.

**A:** First you should check to verify that the speakers are plugged in the correct jack and that the sound and volume settings in Windows are appropriate as well as any power and volume settings on the speakers themselves. If the problem only occurs with CD playback, check the CD player-specific volume settings under advanced volume settings, the disk, the drive and the internal audio cables. If all is well with these checks and the problem remains, check Device Manager under the System applet in Control Panel. If the soundcard is not working correctly, its entry will be flagged with a yellow exclamation symbol. To check the properties of the device, double-click the entry. You'll see some information about what Windows thinks the problem is. This is a good place to begin finding the problem with a device, but sometimes Windows is not able to tell you exactly what is wrong. However, if it is a problem with a driver, Windows will probably recognize it as that.

Once you have the driver in-hand (hopefully it came to you on a disk with the computer), you can try reinstalling it. If you do not have the driver, you can usually find it on the manufacturer's web site. Reinstalling the driver can be accomplished in various ways. You can often reinstall from within Device Manager if the driver was accidentally deleted or became corrupted.

If that fails, remove the entry from Device Manager by highlighting it and selecting Remove. With the entry removed from Device Manager, try using the Add New Hardware wizard in Control Panel. If the card itself is okay, Windows should recognize the card and prompt for drivers.

If that too fails to work, verify the entry is still removed from Device Manager and reboot. Plug n Play should recognize the sound card and prompt you for the location of the driver, assuming that the card is okay.

If none of that works, the manufacturer may have a specific method or setup utility you might use. If not, the card itself is likely bad.

## TROUBLESHOOTING NOTEBOOKS AND LAPTOPS

**Q:** I read your PC repair book and found it very thorough. However I need a drill down on 2 1/2" hdd's in notebook computers. I tried installing new 10 gig drives in a two year old and a four year old NEC notebook where one had 560 meg eide and the other had a 2.4 gig ata/eide, and now I have trouble booting by the floppy, and when I can, I have trouble getting fdisk to create partitions. Once I got as far as trying to format, but it didn't work. Can't find anything in the bios. HELP would be appreciated!

**A:** Thanks for the question! It sounds like the notebook BIOS is not correctly detecting the new hard drive. If this is the case, then FDISK will not work properly, so the first thing you must do is make sure BIOS sees the drive correctly.

First thing is to try the auto-detect feature of your BIOS if it has that. Try booting with the new drive in place and accessing setup during the boot process. Before you make any changes, first write down the current hard drive settings. Then turn auto-detect on and reboot.

Access setup and see if the new drive shows in setup with the correct size. If it does not, then try manually inputting the drive information. Look on the label on the hard drive case for the information setup needs. Then reboot. Once BIOS accepts the setup entries, you should be able to boot from a floppy and use FDISK to partition the drive.

If this does not solve the problem, then try removing the drive and make sure the notebook will boot from floppy with no hard drive present. Also, it is possible that your BIOS does not support hard drives of that capacity, especially on a four year old notebook. Find out if there are any BIOS updates for your notebook. If there is, update your BIOS and try auto-detect again.

**Q:** I have a Compaq Presario 1075 laptop. I can't get it to turn on with or without the battery and/or power supply. I can't even get a green light. Any ideas what may be wrong?

**A:** Thanks for the question. If you can't get a power LED on your laptop when you power up, it is unlikely that you will be able to diagnose the problem yourself. You could try switching to a different AC adapter and/or battery if you have them available. It's possible that the battery is flat or the AC adapter is not working. Also, be sure the problem is not with the house AC outlet you are using for your AC adapter. If trading out the battery or AC adapter does not help, then I recommend you take the laptop to an authorized Compaq service center, if it is still under warranty. Be sure the service center you take it to is an authorized Compaq service center because you might otherwise void the warranty.

It is possible that the laptop's power supply or power switch is not working in which case the fix might not be too expensive.

## **TROUBLESHOOTING NETWORKS**

**Q:** Jean, can you tell me was the distance limitation of various network connections listed below?

**Thinnet coaxial:**

**Thicknet coaxial:**

**Fibre-optics:**

**Wireless:**

**A:** Yes, here they are: Thinnet coaxial: 185 Meters Thicknet coaxial: 500 Meters Fibre-optics: 8+ miles depending on fiber type. Wireless: depends on type

This information is based on IEEE 802.x specs. The values listed assume there are no repeaters, which clean and boost the signal and therefore extend the distance. But, even with repeaters, there might be a limit due to the maximum response time for Ethernet or other network technologies. Wireless networks are proprietary and each has a claimed range at a given transmit power and signal interference. Most wireless LANs are around 100 meters node-to node and some claim three or more times that.

Thanks for the question. You'll need to know the answers when you take the A+ exam.

**Q:** I have a Packard Bell PC bought in March of 1996 that has a CPU running at 75MHz Pentium processor, originally 8 MB of SIMM RAM but upgraded to 24 MB of SIMM RAM with 2 4's and 2 8's. It originally came with 2 4's. We also have an eMachines computer. I'm trying to network the eMachines computer to the Packard Bell through a direct connection using a crossover Ethernet cable. The eMachines already had an Ethernet card but I installed a Linksys v5.1 100TX (\$9.99) and I can't get the Packard Bell running Windows 95 to connect to the eMachines running Windows XP. Since we were assured by a Best Buy employee this card would work with our Packard Bell because it supported Windows 95, we went ahead and bought it at Best Buy. The Packard Bell is setup as the Guest computer and the eMachines is already setup as the host computer. My eMachines detects a connection when I plug the crossover cable into the 2 ethernet jacks. On the box the MINIMUM (doesn't say recommended) hardware requirements are: 200MHz Pentium processor, Windows 95 or later, and 64 MB of RAM. Also, since I am required to set up a password on my Packard Bell (already done so on the eMachines) to log in to Windows, I can't connect anyway. When I try to setup my computer so it prompts me for my username and password to log in to Windows, it won't let me because it says I have no address book. I had deleted several things back in 1997 because I never thought I'd need them and I only had a 600 MB HD. My Master CD is also cracked and no good so I have to get a new Master CD. So anyway, given the information I've provided, do you think that this card will work with the hardware specs I have now on the Packard Bell or should I upgrade? If I upgrade, how do I figure out what socket I have on my motherboard in my Packard Bell? I do not have a motherboard manual and it doesn't tell me the motherboard manufacturer in System Credentials. If this card should work under the hardware specs, would a simple format the hard drive and restore (since I don't have enough space to do just a restore) but enough to get this network to work?

**A:** Good job! It is always good to get a lot of detail in a question! Getting all of the facts together is always the best way to start resolving a problem. With what you have given me, I believe we can draw a few conclusions about your problem.

The first issue to look at is the new Linksys network card you recently purchased. Always pay close attention to the Minimum requirements for any piece of hardware or software you wish to add to a computer. The network card requires a 200MHz Pentium, Windows 95, and 64 MB of RAM. It is true that you have Windows 95 on your computer, but the processor is a 75 MHz Pentium and the current memory is 24 MB of RAM. The CPU is not fast enough and there is not enough RAM memory in your computer to meet the minimum requirements of the network card.

It is not worth your time trying to get some component or software to work in a system it was not designed for. Probably most of the newer network cards will also require more resources than your system currently has.

The second issue to look at is a possible upgrade of your system. The only practical upgrade may be more memory, but that will depend on available slots for the memory and what your motherboard will support. Even if you were to get to 64MB of RAM, your motherboard will probably not support a 200 MHz processor.

There is a point at which upgrading a computer is not practical. Often, on older machines, upgrading one item will lead to the necessity of upgrading others. Soon you could have purchased a new computer. While a computer is only a few years old, parts are usually available to perform upgrades. When a machine is older than three years, parts become harder to find and support. This is primarily because 3 years is typically the longest warranty found on computers.

After about three years, technology has progressed to the point where most people will just get a new computer to remain current. With a computer that is six years old, I would recommend not putting too much money into upgrades. If the computer still performs the tasks you need, keep it. If it doesn't, I would seriously consider looking at a new computer.

Thanks for the question. Again, super details!

## **TROUBLESHOOTING CONNECTIONS TO THE INTERNET**

**Q:** I have a Compaq computer at home. It uses Windows 98. I am having a hard time trying to connect to the Internet through Internet Explorer. I keep getting a "page not available" message. I am using a free Internet provider, netzero. Could this be the reason? Please help me. I am very interested in computers, and would like to gain a better understanding of them. Thanks in advance for your help.

**A:** Thanks for the question. It's a little difficult to tell you precisely how to solve your problem without knowing a little more about how you've set things up, but I'll give it a try. Connecting to the Internet using a modem requires that your modem be installed correctly,



Dial-Up Adapter under Windows is configured correctly, and Dial-Up Networking is configured correctly. Here's a rundown of all those steps:

1. First verify the modem and modem drivers are working correctly. The easiest way to do that is to use HyperTerminal to make a phone call. To access HyperTerminal using Windows 98, click Start, Programs, Accessories, Communications, HyperTerminal. Double-click the Hypertrm.exe icon in the HyperTerminal window. Using this utility, make a phone call to any number such as to a friend's house. Even if you dial an out-of-service number, you should still hear your modem make the call and hear someone say "Hello" on the other end or give a recorded message. This confirms that your modem is installed and configured to make an outgoing call. If this doesn't work, don't go any further with these instructions until you solve this problem. Try uninstalling and reinstalling the modem drivers.

2. Next verify that your modem is configured as a dial-up adapter for Dial-Up Networking. One way to do that is to double click the Network icon in Control Panel. You should see Dial-Up Adapter listed and also see TCP/IP bound to the Dial-Up Adapter. If you don't see Dial-Up Adapter listed, click Add and then select Adapter from the list of components to install, and then click Add. Next select Microsoft, Dial-Up Adapter, and click OK. Follow directions to add the Adapter.

3. If you don't see TCP/IP bound to the Adapter, click Add and select Protocol and click Add. Select Microsoft and TCP/IP and click Add. Follow directions to complete the process of installing TCP/IP.

4. After TCP/IP is installed and bound to the Adapter, return to the Network window and select TCP/IP and click Properties to configure the protocol. On the IP Address tab, select Obtain an IP Address automatically. Click OK to close the window. Close the Network window. You might be asked to reboot the PC now.

5. Next create an icon to make a phone call to your ISP. To do this, click Start, Programs, Accessories, Communications, and click Dial-Up Networking. Double-click Make New Connection. Select your modem and click Next. Enter the phone number of your ISP and click Finish. The new dial-up icon appears in the Dial-Up Networking window. Right click the icon and select Properties from the drop-down menu. Click the Server Types tab and verify that these choices are made: · Type of Dial-Up Server is PPP Internet · "Log on to network" is checked · TCP/IP is checked

6. Click TCP/IP Settings to open the TCP/IP Settings dialog box. Verify that these settings are chosen: · Server assigned IP address · Specify name server addresses · Use IP header compression · Use default gateway on remote network

7. Enter the IP addresses of the Primary and Secondary DNS servers. (This information is provided by your ISP.)

8. You should now be able to dial up your ISP and complete the connection. If you still can't connect, start all over and check everything. Sometimes uninstalling and reinstalling TCP/IP will help, but after you reinstall it, then redo all the TCP/IP settings, as they will be lost when you uninstall.

For more information, the book, A+ Guide to Managing and Maintaining Your PC contains a



section on how to connect to the Internet. You can read that section and follow the step-by-step instructions. If your ISP has a help desk, you can also call it and ask for help if are still having problems.

**Q:** I am running Windows XP Professional on a 950 MHz built PC. Weeks after downloading the free version of music match and using it, my MP3 files stopped playing on them. They also stopped playing on Realone Player and Windows Media Player. I obviously had a driver issue with my Creative Lab value soundcard. After trying to fix that, my video card had problems (ATI all in wonder). Then my modem driver stopped working. When I tried to log on (dial into the server) it gave me an “unable to establish connection.” Having no luck uninstalling and re-installing the modem driver (still got the same error message), I decided to put in a brand new modem. I installed the driver and still get the same error. What do you think the problem is? I feel I could fix my video and sound card problems if I could just get online, but I can’t. I scanned my system for viruses using Norton 2002 antivirus and came up with nothing. I spent 3 hours with Microsoft tech support and they couldn’t figure it out. They claimed it was a modem driver problem. They thought they fixed my video and sound card problems, but they didn’t. Any ideas? I’m at the end of my rope. I’m taken computer repair classes and am almost ready to take the A+ exam, but I can’t figure this out. I fix friends’ computers but can’t fix mine. I’m ready to format my drive and start all over again. Any suggestions before I take that dive? Please help.

**A:** You’re obviously a pretty computer-savvy person, and you’ve taken the right course of action so far. I think you are quite able to get to the bottom of this. Since you think you could fix the sound and video cards, you might want to try taking the computer to a friend’s house or getting them to download the drivers for you to floppy disks. Once you get the video problem solved, you can move on to the modem problem.

However, if you think it would take less time to reload the OS, then do so. Professionally, it is always ideal to know what the source of the problem is, but sometimes time and practicality win over and it’s just simpler to reload. If you decide to reload, be sure to back up any important data and make sure you have all your software CDs or disks available. I would definitely first format the hard drive to eliminate the possibility of a virus.

**Q:** My problem is this: I recently purchased a used corporate computer that has an integrated NIC card. I installed Windows 2000 Professional on it and it runs fine. My trouble is that I cannot get it to connect to the Internet. I have disconnected my cable line from my old computer and connected it to the “new” one. It wants to use an address that is not in the range of my ISP address. I use a cable connection for my ISP. I have disabled the NIC in the Device Manager and installed one that I had lying around, but I still have the same problem. Tech support was not able to help me. Any suggestions or ideas will be tried and appreciated.

**A:** First, thanks for the good word about the site. I’m glad you like it.

As to your problem, it sounds like the PC might possibly be configured with a static IP address or maybe it's configured as a DHCP client that is unable to reach a DHCP server for a lease and is therefore self configuring. However, if this is the case, you should have had the chance to notice this when installing the second NIC. Try verifying that the machine is configured as a DHCP client. If it is configured this way, perform a loop-back test by using the ping command to PING 127.0.0.1 to verify that TCP/IP is configured.

If you are still unable to obtain a valid lease you might look into the possibility that you need to report the MAC address of your new NIC to the cable provider. Most cable Internet providers will track the MAC address of the card and if this is not correct you will not be allowed to connect.

**Q: My computer is giving me an error that says it cannot find file C:\\windows.0001\\temp internet files\\content.ie5\\PCAGZCEG\\content\_interface[1].sif. What does this mean?**

**A:** Temporary Internet files are where Internet Explorer stores all the components of Web pages that you have viewed so that they load more quickly when you return to the site using Internet Explorer. Normally, Windows is installed in the C:\\Windows folder, and the temporary Internet files are stored in a subfolder of C:\\Windows. It's strange to me that your system is looking for temporary files in the folder you mentioned.

I'm trying to think of situations where Windows might be using this folder. Since you didn't mention any other problems, I'm assuming that your computer is otherwise behaving normally. Therefore, I'm thinking that Windows must be installed in this directory for some reason. Or perhaps Windows has been backed up; you're running Windows from the backup, and you've run into a situation where you're trying to access a file that did not get backed up to that folder for some reason or other. Other possibilities might be if you recently updated IE or you are using a different browser altogether and that browser wants to use a strange temporary Internet files folder.

Without a lot of specific information about the history of your situation, I can only think of one thing to try. In IE, try clearing the cache by clicking the Delete Files button on the General tab of Internet Options in Control Panel. That's not much, but it might change the error message or produce a new message that will lead you to the solution.

## WHERE TO GO FOR MORE HELP

**Q: I'm looking for as many: "How to repair/troubleshoot a PC" downloads as possible. I don't know where to go to get them. Also, do you know of any good ftp sites with technical white papers on computer repair and components?**

**A:** Check out the following sites. You'll see these and several others listed in Appendix F, "Important URLs" in my book, PC Troubleshooting Pocket Guide for Managing and Maintaining Your PC.

Advanced Services Network (Networking and Windows) <http://www.aserve.net>  
CNET, Inc. (Technical information) <http://www.cnet.com>  
CyberCollege (Multimedia technology) <http://www.cybercollege.com>  
Internet.com Corp. (Encyclopedia of PC terms) <http://www.pcwebopedia.com>  
Kingston Technology (technical info about memory) <http://www.kingston.com>  
Micro Firmware (BIOS upgrades and technical info) <http://www.firmware.com>  
PC Guide (Technical info and troubleshooting) <http://www.pcguides.com>  
Tom's Hardware Guide (in-depth technical info) <http://www.tomshardware.com>  
The Computer Paper (Technical info and buyer's guide) <http://www.tcp.ca>  
Zoom Telephonics, Inc. (Modems) <http://www.modems.com>

If you or others discover other good sites, please let me know!

**Q: I've been searching far and wide for a list of runtime errors in numerical order (with an explanation of the error). Do you know where I can find a list like that?**

**A:** The best places to check are the web sites of the BIOS manufacturers or the motherboard manufacturers. Try these sites:

BIOS manufacturers:

AMI BIOS [www.ami.com](http://www.ami.com)  
Phoenix and Award [www.phoenix.com](http://www.phoenix.com)  
Compaq [www.compaq.com](http://www.compaq.com)  
Dell [www.dell.com](http://www.dell.com)

BIOS upgrades:

Micro Firmware [www.firmware.com](http://www.firmware.com)  
Unicore [www.unicore.com](http://www.unicore.com)

A few motherboard manufacturers:

Abit [www.motherboards.com](http://www.motherboards.com)  
ASUS [www.asus.com](http://www.asus.com)  
Intel [www.intel.com](http://www.intel.com)

Web content is constantly changing. Does anyone reading this know of better sources? Feel free to jump in with some suggestions!

**Q: Can you define this error for me: Unhandled exception C0000005@address 100016b8. Can you tell me where I can go to research this type(s) of problems in the future?**

**A:** I had not heard of this error before, so I went to the Microsoft Support site (support.microsoft.com) and searched the knowledge base on the error message. I got an exact hit so I'm thinking you're probably using Windows XP Home Edition and have DelFin Media Viewer installed. Microsoft says a problem with this Media Viewer installed under Win XP Home Edition can be solved by doing the following:

1. Follow the procedures given by DelFin Project, Inc. ([www.delfinproject.com](http://www.delfinproject.com)) to remove the software.
2. Next you will edit the registry to delete an entry to load the Media Viewer. To load the registry editor, click Start, click Run, type regedit and click OK.
3. Locate the Run registry key in the following location: HKEY\_LOCAL\_MACHINE\SOFTWARE\Windows\CurrentVersion
4. Delete the Pgmonitr.exe string value. It may also be listed as DelFin Media Viewer in the Run list.
5. Quit Registry Editor.
6. Restart your computer.

Microsoft didn't mention it, but you should not edit your registry without first backing it up. The best way to do that is to back up the entire system state. Here's how to do that:

1. Click Start, All Programs, Accessories, System Tools, Backup. The Backup or Restore Wizard appears.
2. Click Advanced Mode. The Backup Utility window appears. Click the Backup tab.
3. Check the System State box and under Backup media or file name: select the location to store the backup.
4. Click Start Backup. In the dialog box, that appears, click Start Backup again to confirm the action. After the backup is done, click Close to close the Backup utility.

The Knowledge Base article that gives the above information is Article 811270. If you want to look at it yourself, go to support.microsoft.com site and search on the article number.

You asked about where to go in the future to research this type of problem. That's a very good question. First I try the Microsoft support site. If that doesn't work, then I go to [www.google.com](http://www.google.com) and search on the error message. Most often I can find this type of error at one of these two sites. If these don't work, I need a little more information about the problem to decide which site to turn to next.